

ABSTRACT

A process for producing a Schottky junction type semiconductor device is characterized by comprising forming 5 a Schottky electrode on a surface of a silicon carbide epitaxial layer, wherein a Schottky electrode made of molybdenum, tungsten, or an alloy thereof is formed on the surface of the silicon carbide epitaxial layer and is subjected to heat treatment so as to induce an alloying reaction at an interface 10 of the silicon carbide epitaxial layer and the Schottky electrode, thereby forming an alloy layer at the interface, whereby the height of a Schottky barrier is controlled while maintaining an n-factor at a nearly constant low value.